

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 20 JUN 2002

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Applicant's or agent's file reference HH/CS 45353	FOR FURTHER ACTION - See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE01/01366	International filing date (day/month/year) 15.06.2001	Priority date (day/month/year) 19.06.2000
International Patent Classification (IPC) or national classification and IPC ₇ H 04 B 7/185		
EPO - DG 1 13.09.2002		
Applicant Telefonaktiebolaget LM Ericsson (publ) et al.		
(104)		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT):</p> <p>These annexes consist of a total of _____ sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input checked="" type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 	
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Date of submission of the demand 08.01.2002	Date of completion of this report 24.05.2002
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88 Form PCT/IPEA/409 (cover sheet) (January 1998)	Authorized officer Peder Gjervaldsaeter/AE Telephone No. 08-782 25 00

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE01/01366

1. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(h)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-15</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-15</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-15</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

In the International Search report the following documents were cited:

D1: US5950129 A
D2: WO9944309 A
D3: EP0915577 A2
D4: EP0998062 A1

D1 describes a telecommunication system providing two-way in-flight operation. In one embodiment, see figure 5, the system contains a gateway mobile switching centre (G-MSC) and a ground in-flight controller (GISC), located on ground for receiving and routing calls to and from the aircraft. The aircraft includes an airborne radio base station (A-RBS) located on board the aircraft for converting RF signals produced by the mobile to a protocol compatible with GISC, and a coax cable for connecting the mobile station to the A-RBS.

Documents D2 to D4 represent the general state of the art.

The invention according to claim 1 and 6 differs from D1 in that the periodic location update messages are sent to the satellite network from a common terminal, to which several mobile terminals are attached. The satellite network holds the information about which terminals are attached to which common terminal, as it receives a message each time a mobile terminal is attached or disconnected to a common terminal. In that way, the satellite system can derive the new location for each terminal in the system. This solves the problem of overload caused by several simultaneous location updates in a moving system.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V

The system in D1 is seen as an extension of a cellular system to a satellite system. A location update would then normally be sent by each mobile terminal, as it enters a new satellite location area. According to D1 the terminal numbers are stored in the aircraft in-flight system controller (AISC). Though it is not mentioned in D1, that information about which mobile stations are located in which vehicle or craft is stored in the home location register (HLR) or elsewhere in the satellite system. This would be required to be able to send only one location update from each vehicle or craft. No information in D1 directs to the assumption that the periodic location updates are performed by the vehicle or craft and not, as expected, by each mobile unit. Neither would any information available in D1, lead a person skilled in the art to this solution to the problem stated above.

In claim 11 of the application a common terminal as described above is claimed. Consequently the invention according to claim 11 is also considered to be novel and to involve an inventive step.

Thus, the invention according to claim 1-15 is considered to be novel and to involve an inventive step. The invention is also considered to be industrially applicable.

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VI. Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 0115337	2001.03.01	2000.08.10	1999.08.25
WO 0115466	2001.03.01	2000.08.10	1999.08.25
GB 2350972	2000.12.14	2000.06.08	1999.06.08

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)